SEMESTER III

BUSINESS RESEARCH METHODS

1. Course Description

Programme: M. Com (Finance and Analytics)
Course Code:
Type of course: DSC
No. Of Credits 5

Max Hours: 90
Max Marks: 100
Hours per week: 4T+2P hrs

2. Course Objectives

- To acquaint the students with the requisite business research methods

2. Course Outcome:

At the end of the course, the student will be able to

CO1: Understand the of concept and fundamentals for different types of research.

CO2: Applying relevant research techniques.

CO3: Understanding relevant scaling & measurement techniques and should use appropriate sampling techniques

CO4: Evaluate data using statistical analysis

CO5: Understand the research report

4. Course Content

MODULE I: INTRODUCTION (18 Hrs)

Research: – Definition, Meaning, Importance types and Qualities of Research; Research applications in functional areas of Business, Emerging trends in Business research. Research & the Scientific Method: Characteristics of scientific method. Steps in Research Process, Concept of Scientific Enquiry: – Formulation of Research Problem – Management Question – research Question – Investigation Question , Research Proposal – Elements of a Research Proposal, Drafting a Research Proposal, evaluating a research proposal.

MODULE II: RESEARCH DESIGN (18 Hrs)

Concept, Features of a good research design, Use of a good research design; Qualitative and Quantitative research approaches, Comparison – Pros and Cons of both approaches., Exploratory Research Design: Concept, Types: Qualitative techniques – Projective Techniques, Depth Interview, Experience Survey, Focus Groups, Observation. Descriptive

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

Research Designs: Concept, types and uses. Concept of Cross-sectional and Longitudinal Research, Experimental Design: Concept of Cause, Causal relationships, Concept of Independent & Dependent variables, concomitant variable, extraneous variable, Treatment, Control group.

MODULE III: SCALING TECHNIQUES & SAMPLING (18 Hrs)

Concept of Measurement: Need of Measurement; Problems in measurement in management research – Validity and Reliability. Levels of measurement – Nominal, Ordinal, Interval, Ratio. Attitude Scaling Techniques: Concept of Scale – Rating Scales viz. Likert Scales, Semantic Differential Scales, Constant Sum Scales, Graphic Rating Scales – Ranking Scales – Paired comparison & Forced Ranking – Concept and Application.

Defining the Universe, Concepts of Statistical Population, Sample, Characteristics of a good sample. Sampling Frame (practical approach for determining the sample frame expected), Sampling errors, Non Sampling errors, Methods to reduce the errors, Sample Size constraints, Data Cleaning, Non Response., Probability Sample: Simple Random Sample, Systematic Sample, Stratified Random Sample, Area Sampling & Cluster Sampling. , Non Probability Sample: Judgment Sampling, Convenience Sampling, Purposive Sampling, Quota Sampling & Snowballing Sampling methods. Determining size of the sample – Practical considerations in sampling and sample size, sample size determination.

MODULE IV: DATA PRESENTATION AND HYPOTHESIS TESTING (18 Hrs)

Analysis of Data: Meaning, Purpose, Editing, Coding, Tabular representation of data, frequency tables, Construction of frequency distributions, Graphical Representation of Data: Bar charts, Pie charts, Histogram. Hypothesis: Qualities of a good Hypothesis –Framing Null Hypothesis & Alternative Hypothesis. Testing of Hypothesis Concept (only using software): Chi-square Test, t-test and ANOVA,

MODULE V: REPORT WRITING (18 Hrs)

Report Writing: Meaning, Importance, Functions of Reports, Essential of a Good Report, Content of Report, Steps in Writing a Report, Types of Reports, Footnotes and Bibliography. Ethics and Research, Objectivity, Confidentiality and Anonymity in Research. Plagiarism.

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SPSS lab exercises wherever applicable

5. References:

1. Research Methodology, Deepak Chawla, Neena Sondhi, Vikas Publication
2. Business Research Methods, Naval Bajpai, Pearson Education
3. Research Methodology, C R Kothari, New Age International.
4. Business Research Methods by Donald Cooper & Pamela Schindler, TMGH, 9th Edition.
5. Business Research Methods by Alan Bryman & Emma Bell, Oxford University Press, 2ndEdition.
6. Business Research Methods by T N Srivastava & Shailaja Rao, TMH Publication, 2ndEdition Hall of India (P)Ltd

Online Resources wherever possible

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SEMESTER III

HR ANALYTICS

1. Course Description

Programme: M. Com (Finance and Analytics)

Course Code: Max Hours: 90

Type of course: DSC Max Marks: 100

No. Of Credits 5 Hours per week: 4T+2P hrs

2. Course Objectives

- To provide an overview of evolution of HRM and its journey towards Analytics and highlight the need, concepts and scope of HR Analytics linked with business outcomes.
- To elucidate the methods of capturing, examining & purifying data and to introduce the aspect of HR Metrics in the context of HR Analytics.
- To impart knowledge of conduction of HR Analytics for key HR Processes using MS Excel.
- To provide an overview of various tools and software technologies used for conduction of Descriptive HR Analytics and Visualization of HR Data.
- To provide a futuristic perspective of Predictive and Prescriptive HR Analytics.

3. Course Outcome:

At the end of the course, the student will be able to

CO1: Understand the theory, concepts, and business application of human resources research, data, metrics, systems, analyses, and reporting.

CO2: Discuss the role and importance of HR analytics, and the ability to track, store, retrieve, analyse and interpret HR data to support decision making.

CO3: Apply benchmarks/metrics to conduct research and statistical analyses related to Human Resource Management

CO4: Apply appropriate software to record, maintain, retrieve and analyse human resources information (e.g., staffing, skills, performance ratings and compensation information).

CO5: Apply quantitative and qualitative analysis to understand trends and indicators in human resource data; understand and apply various statistical analysis methods.

Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

4. Course Content

MODULE I: Introduction to HR Analytics (18 hrs)

Introduction to HR analytics: Meaning of HR analytics, Definition of analytics, Need for HR Analytics, Leading Practices for Improved Organizational Performance, Contribution of HR Analytics, Approaches to HR Analytics, Human Resources analytics applications, Role of HR in building organizational capabilities.

MODULE II: Understanding HR Analytics & Conducting HR/Workforce Analytics (18hrs)

Models of HR Analytics, How to Conduct HR Analytics. Understanding HR Data: Importance of Data, Types and Scales of Data; Methods of Capturing Data, Data Examination & Purification. Understanding various HR Metrics from the perspective of HR Analytics.

MODULE III: Analytics for Key HR Processes Using MS Excel (18 hrs)

HR Analytics for Recruitment & Selection, Training & Development, Performance Appraisal, Talent Management, Employee Engagement, Compensation Management and Expatriate Management.

MODULE IV: Descriptive Analytics
(18 hrs)

Descriptive Analytics in HR: HR Dashboards using MS Excel, Slicing and Dicing of HR Data using MS Excel Pivot Table Applications, Data Visualization for Key HR processes.

MODULE V: Predictive & Prescriptive HR Analytics (18 hrs)

Predictive HR Analytics: Correlation, Linear and Multiple Regression, Factor Analysis and Cluster Analysis, Comparison of Means and Analysis of Variance for Manpower Demographics, Employee Satisfaction, Training Effectiveness etc. Prescriptive HR Analytics, Predictive vs Prescriptive HR Analytics, Future of HR Analytics.

5. References:

1. Rama Shankar Yadav & Sunil Maheshwari, HR Analytics, Wiley, 2021

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

2. Pratyush Banerjee, Jatin Pandey & Manish Gupta, HR Analytics: Practical Applications of HR Analytics, Sage, 2019.

3. Dipak Kumar Bhattacharya, HR Analytics, Sage, 2017.

4. Ramesh Soundrarajan & Kuldeep Singh, Winning on HR Analytics, Sage, 2017. ▪ Nishant Uppal, Human Resource Analytics, Pearson, 2021.

5. Bharti Motwani, HR Analytics: Practical Approach Using Python, Wiley, 2021.

6. Edwards Martin R, Edwards Kirsten (2016),"Predictive HR Analytics: Mastering the HR Metric", Kogan Page Publishers,

7. Fitz-enz Jac (2010), "The new HR analytics: predicting the economic value of your company's human capital investments", AMACOM,

8. Fitz-enz Jac, Mattox II John (2014), "Predictive Analytics for Human Resources", Wiley,

Deepak
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SEMESTER III

Guidelines for Summer Internship
Max Marks: 100

Total Marks: 100 (60 marks – external evaluation, 20 marks – internship report, 20 marks - viva voce **Period of training**: 200 hours commencing from the first week of May subsequent to the completion of Semester II. At the end of the internship period, the student will submit to the Department of Commerce, St. Francis College a typed report which will include the following:

I. Company Profile: Ownership & management profile, brief history, organisation vision & mission, Organisation structure, core competency, area of operations, client/customer profile, sources of recruitment, selection, training, induction & placement procedures and retention strategies if any. SWOT analysis and CSR practices if any. **(10% of the report)**

II. Information on the operations of the firm with clearly defined information (wherever possible) about strategic financial planning, accounting practices, operating budgets, analysis of financial statements, investment policies and procedures, audit practices & any other information. **(20 % of the report)**

III. Detailed report about the work/project/assignments handled by the student along with weekly timelines, people interacted with, difficulties faced and a self-appraisal of performance. **(70% of the report)**

Please note the above information is indicative & the report will be prepared by the student depending on the nature of the organisation and the kind of assignment handled.

The student will report to a mentor at the organisation, who will guide the student on the work to be performed & at the end of the period will evaluate the student on the following parameters:

The below listed criteria will be used by the external mentor where the student is doing her internship.

Please rate the intern in the following areas, using the scale below. Please feel free to write additional comments.

Scale: 5= Excellent, 4= Above Average, 3= Average, 2=Below Average, 1= Poor

1. Technical skills ___
2. Time Management ___
3. Overall quality of assignments completed ___
4. Ability to communicate in writing ___
5. Ability to communicate verbally ___
6. Attitude and enthusiasm for assignments ___
7. Aptitude for learning ___
8. Receptive to Criticism ___
9. Judgment/Decision Making ___
10. Ability to work with others ___
11. Professional demeanor ___
12. Attendance/punctuality ___

Deepa S
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SEMESTER III

INVESTMENT MANAGEMENT

1. Course Description

Programme: M. Com (Finance and Analytics)
Course Code: Max Hours 75
Type of course: DSE Max Marks: 100
No. Of Credits 5 Hours per week: 5 hrs

2. **Course Objective:**

- The objective of the course is to familiarize the students with the principles and practice of Investment Management.
- The course will also acquaint the students with the functioning of the Indian Capital Market.

3. **Course Outcome:** At the end of this course the students will be able to

CO1: Describe the investment environment and different types of investment vehicles

CO2: Describe the various financial assets and nuances of the Indian capital market.

CO3: Apply trading procedures applicable to the Indian capital market, and describe and calculate risk and expected return of various investment securities.

CO4: Analyze the expected return of the investment portfolio, and examine the theory of Portfolio Management.

CO5: Apply the Markowitz model in constructing an efficient portfolio, and the Sharpe Single Index Model

4. Course Content:

MODULE I : INTRODUCTION (15 Hrs)

Investment: Meaning – Characteristics – Importance – Objectives – Factors of Sound Investment – Investment Environment – Investment Media – Principles of Investment – Speculation – Gambling – Investment Process (Theory).

Financial Assets: Meaning – Classification – Shares – Debentures – Bonds – Innovative Financial Assets- Properties of Financial Assets (Theory).

MODULE -II: INDIAN CAPITAL MARKETS - AN OVERVIEW (15 Hrs)

Primary Market: Meaning – Growth and Development – Role of NIM – Methods of Issues – Parties Involved – Allotment Process – Investor Protection – Recent Trends (Theory).

Secondary Market: Meaning – History – Functions – Regulatory Framework – Listing and Delisting of Securities – Trading Procedure – Stock Exchanges in India – Growth of Stock Exchanges in India – SEBI – Its Functions and Role (Theory).

MODULE -III: RISK AND RETURN ANALYSIS (15 Hrs)

Return: Meaning – Holding Period Return – Equivalent Annual Return – Expected Value of Return – Measuring Returns from Historical Data – Measuring Average Returns over Multiple Period – Arithmetic Average – Geometric Average – Rupee Weighted Average Return (Including Problems).

Risk: Meaning – Sources of Risk – Market Risk – Interest Risk – Interest Rate Risk – Purchasing Power Risk – Business Risk – Financial Risk – Types of Risk – Systematic Risk – Unsystematic Risk – Risk Aversion and Risk Premium – Measurement of Risk – Range as a Measure of Risk – Standard Deviation as a Measure of Risk –β as a Measure of Risk (Including Problems).

MODULE -IV: PORTFOLIO ANALYSIS (15 Hrs)

Portfolio Analysis: Meaning – Traditional Vs Modern Portfolio Analysis – Return on Portfolio – Risk on Portfolio – Diversification of Investments – Reduction of Portfolio Risk through Diversification – Security Returns Perfectly Positively Correlated – Security Returns Perfectly Negatively Correlated – Security Returns Uncorrelated (Including Problems)

Markowitz Model: Assumptions – Parameters – Effect of Combining Two Securities – Interactive Risk Through Covariance – Coefficient of Correlation – Change in Portfolio Proportions – Concept of Dominance – Limitations of Markowitz Model (Including Problems).

MODULE -V: PORTFOLIO SELECTION (15 Hrs)

Portfolio Selection: Meaning – Feasible Set of Portfolios – Efficient Set of Portfolios Selection of Optimal Portfolios (Including problems).

Sharpe Single Index Model: Measuring Security Return and Risk – Measuring Portfolio Return and Risk – Multi Index Model (Including Problems).

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

5. References:

1. Agarwal: A Guide to Indian Capital Market, New Delhi;
2. Avadhani, V.A: Indian Capital Markets, Himalaya;

3. Mayo: Investments, 7e Thomson;
4. Bhalla, V.K: Investment Management. S. Chand & Co.;
5. Reilly: Investment Analysis and Portfolio Management, Thomson;
6. Kevin, S: Security Analysis Portfolio Management, PHI;
7. Fabozzi, Frank J: Investment Management, Prentice Hall;
8. Fischer, Donald, E. and Ronald, J.Jordan: Security Analysis & Portfolio Management, PHI;
9. Strong: Portfolio Construction and Management, PHI;
10. Sharpe etal: Investments, PHI;
11. Machi Raju, H.R: Working of Stock Exchanges in India: Wiley Eastern Ltd;
12. Preeti Singh: Investment Management, Himalaya;
13. Sulochana, M: Depository System - Problems & Prospects, Kalyani.
14. Sulochana, M: Investment Management, Kalyani;
15. Shashi K. Gupta and Rosy Joshi: Security Analysis and Portfolio Management, Kalyani;
16. Gangadhar V. And G. Ramesh Babu: Investment Management, Anmol.

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SEMESTER III

PYTHON LAB

1. Course Description

Programme: M. Com (Finance and Analytics)
Course Code: Max Hours: 60
Type of course: GE Max Marks: 50
No. Of Credits 2 Hours per week: 4P hrs

2. Course Objectives

- The course aims to impart knowledge about python programming language and its applications in the business world
- To provide hands-on-training to use various tools and libraries of Python for advanced data analytics with real and simulated datasets

3. Course outcomes

After the course the students will be able to:

CO1: Understand the main features of Python and its applications for analytics, including data exploration, analysis, and problem-solving.

CO2: Analyze and solve real-world problems in finance, HR, marketing, and other business domains by applying Python skills for data analysis, visualization, and modeling.

CO3: Apply Python tools and techniques to analyze business data; visualize findings through specialized tools; and basic data mining and machine learning methods.

4. Course Content:

MODULE I: THE PYTHON FUNDAMENTAL AND DESCRIPTIVE STATISTICS USING PYTHON (30 Hrs)

Anaconda, IDEs-Jupyter, Pycharm; GIT- Configuration with IDEs, Creating and Managing Analytics Projects, Basic Data Structures, Programming Constructs, Libraries-Numpy, Pandas, Matplotlib, Data Wrangling, Managing

Missing values, Outliers Detection, Various types of Joins, merge, Partitioning data into train and test set, Scaling of

data, Descriptive Statistics: measures of central tendency, measures of dispersion.

MODULE II: GRAPHICAL REPRESENTATION OF DATA AND PREDICTIVE STATISTICAL MODELING (30 Hrs)

Deepa S
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

Selection of Graph, Basic Graphs- histogram, Bar Plot, boxplot, pie etc., Libraries- Matplotlib, seaborn, plotline; Advanced Graphs, Exploratory visualization and Explanatory visualization, Exporting Graphs.

Hypothesis Testing, Correlation, Linear Regression, Logistic Regression, ANOVA, Exploratory Factor Analysis, Principal Component Analysis, Time Series Analysis

Practical Exercises:

The learners are required to:

1. Analyse the data with the help of descriptive statistics.
2. Evaluate the data by applying exploratory visualisation.
3. Compute output of secondary/primary data with the help of predictive statistical modelling.

5. References:

1. Pilgrim, M., & Willison, S. (2009). Dive into python 3 (Vol. 2). New York, NY, USA: Apress.

2. Raschka, S. (2020). Python machine learning. Packt publishing ltd.

3. Mitchell, T. M., & Mitchell, T. M. (1997). Machine learning (Vol. 1, No. 9). New York: McGraw-hill.

4. Joshi, P., Hearty, J., Sjardin, B., Massaron, L., & Boschetti, A. (2016). Python: Real world machine learning. Packt

Publishing Ltd.

5. Kumar, M. (2022). Business Analytics using Python. Excellence Brings Success

6. Liu, Y. H. (2020). Python Machine Learning By Example: Build intelligent systems using Python, TensorFlow 2, PyTorch, and scikit-learn. Packt Publishing Ltd.

7. Massaron, L., & Boschetti, A. (2016). Regression analysis with Python. Packt Publishing Ltd.

Head
Department of Commerce
Osmania University
Hyderabad-500 007

Deepa

Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

SEMESTER III

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

1. Course Description

Programme: M. Com (Finance and Analytics)

Course Code: Max Hours: 75

Type of course: DSE Max Marks: 100

No. of Credits 5 Hours per week: 5 hrs

2. Course Objectives

- The objective of the course is to familiarize with securities market analysis and valuation of different securities
- To help students in building optimal portfolio and acquaint with trends in the securities market.

3. Course Outcome: At the end of the course, the student will be able to

CO1: Examine and apply fundamental analysis and technical analysis for real time financial data.

CO2: Explain and apply various share and bond valuation techniques

CO3: Discuss and apply CAPM and Arbitrage Pricing Theory.

CO4: Analyze and evaluate portfolio performance, calculate stock indices, and use portfolio revision techniques.

CO5: Understand and describe international investing concepts.

4. Course Content

MODULE I: SECURITY ANALYSIS (15 Hrs)

Fundamental Analysis: Meaning – Economy Analysis – Economic Forecasting – Forecasting Techniques – Industry Analysis – Concept of Industry – Industry Life Cycle – Industry Characteristics – Company Analysis – Financial Statements – Analysis of Financial Statements (Theory Only).

Technical Analysis: Meaning – Dow Theory – Basic Principles of Technical Analysis – Trends and Trend Reversal – Eliot Wave Theory – Mathematical Indicators – Market Indicators (including simple problems).

Efficient Market Theory: Random Walk Theory – The Efficient Market Hypothesis – Forms of Market Efficiency – Tests of Efficient Market Hypothesis (Theory).

Deepa
Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

MODULE II: VALUATION SECURITIES (15 Hrs)

Share Valuation: Concept of Present Value – Share Valuation Model – One Year Holding Period – Multiple Year Holding Period – Constant Growth Model – Multiple Growth Model – Multiplier Approach to Share Valuation (Including problems).

Bond Valuation: Bond Returns – Coupon Rate – Current Yield – Spot Interest Rate – Yield to Maturity– Yield to Call – Bond Prices – Bond Risks – Bond Duration –Bond Immunization(Including Problems).

MODULE III: CAPITAL MARKET THEORY (15 Hrs)

Capital Market Theory: Assumptions- Capital Asset Pricing Model – Efficient Frontier with Riskless Lending and Borrowing – Capital Market Line – Security Market Line – SML Vs. CML – Pricing of Securities with CAPM – Limitation of CAPM (Including problems).

Arbitrage Pricing Theory: The Law of One Price – Assumptions – Arbitrage Pricing for one Risk Factor – Two Factor Arbitrage Pricing – Multiple Arbitrage Pricing – Limitations of APT (Including Problems).

MODULE IV: PORTFOLIO PERFORMANCE EVALUATION (15 Hrs)

Portfolio Performance Evaluation: Need for Evaluation – Evaluation Perspective – Meaning of Portfolio Evaluation – Measuring Portfolio Return – Risk Adjusted Returns – Sharpe Ratio – Treynor Ratio – Differential Return (Including Problems).

Security Market Indexes: Meaning – Different Averages and Indexes Exist – The Construction of Indexes – Maintenance Problems with Security Market Indexes – Stock Market Index Revision (Including Problems).

MODULE V: PORTFOLIO REVISION: (15 Hrs)

Portfolio Revision: Need for Revision – Meaning of Portfolio Revision – Constraints in Portfolio Revision – Portfolio Revision Strategies – Formula Plan – Constant Rupee Value Plan – Constant Ratio Plan – Dollar Cost Averaging (theory).

International Investing: Benefits and Risk of Global Investing – Factors Influencing International Investing(Theory).

Deepa

Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16

5. **References:**

1. S. Kevin : Security Analysis and Portfolio Management, Prentice Hall India
2. Punithavathi Pundyan: Securities Analysis & Portfolio Management, Vikas
3. Avadhani,V.A: Investment & Security Management in India, Himalaya
4. Bhall,V.K.: Investment Management, S. Chand & Co.
5. Fisher Donald E & Ronald J Jordan: Securities Analysis & Portfolio Management, Prentice Hall India;
6. Francicia Jack Clark & Richard W Taylor: Theory & Problems of Investment, Mcgrawhill;
7. Gangadhar V: Investment Management, Anmol
8. Mayo: Investments, Thomson
9. Reilly: Investment Analysis and Portfolio Management, Thomson
10. Strong: Practical Investment Management, Thomson
11. Sharp Etal.: Investments, Prentice Hall; 13.Sulochana M: Investment Management, Kalyani.

Head
Department of Commerce
St. Francis College for Women
Begumpet, Hyderabad - 16